

REMARKS

The Office Action dated February 8, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

In accordance with the foregoing, claim 3 has been amended to improve clarity of the features recited therein. No new matter is being presented, and approval and entry are respectfully requested. As will be discussed below, it is also requested that all of claims 1-6 be found allowable as reciting patentable subject matter.

Claims 1-6 stand rejected and pending and under consideration.

REJECTION UNDER 35 U.S.C. § 102:

In the Office Action, at page 2, item numbered 2, claims 1, 2, 4, and 5 were rejected under 35 U.S.C. § 102 as being anticipated by U. S. Patent No. 5,802,494 to Kuno ("Kuno"). The Office Action took the position that Kuno describes all the recitations of independent claim 1 and related dependent claims. This rejection is traversed and reconsideration is requested.

Independent claim 1, upon which claims 2-6 are dependent, recites an image transmission system for a mobile robot, including a camera for capturing an image as an image signal, a microphone for capturing sound as a sound signal, and human detecting means for detecting a human from the captured sound. The system also includes a power drive unit for moving the robot toward the detected human, an image cut out means for

cutting out an image of the detected human according to information from the camera; and image transmitting means for transmitting the cut out human image to an external terminal.

As will be discussed below, Kuno fails to disclose or suggest the elements of any of the presently pending claims.

In one of the embodiments of the present invention, a mobile robot detects a human from audio information and approaches the detected human to then capture the image of a face of a detected human. On the other hand, the robot disclosed in Kuno is dedicated to the monitoring of a hospitalized person. This robot monitors or observes the face of the person in the bed and is capable of detecting changes in face features.

For instance, Kuno describes, as shown in FIG. 3, a data-acquiring section 1 comprising a robot 5, a fixed video camera, an illumination lamp, a speaker, and the like. See col. 3, lines 33-36. The robot 5 has a video camera in its head, a microphone and a speaker mounted on its head, and a display on its trunk as shown in FIG. 4. The video camera takes pictures of the subject sick in the bed in the sick room. The microphone detects any speech the subject utters. The speaker gives the messages to the subject, which a physician makes in the monitor room.

Furthermore, Kuno provides that the robot 5 can detect if the subject has moved from the bed. See col. 9, lines 50-53. The robot 5 can also analyze the face features of the subject to determine if the subject is facing or facing away from the camera (See col. 13, lines 1-9) and is demonstrating an abnormal feature (See col. 14, lines 24-39).

However, Kuno does not teach or suggest, at least, “human detecting means for detecting a human from the captured sound” and “a power drive unit for moving the robot toward the detected human,” as recited in independent claim 1. Rather, from the description and figures provided in Kuno, the robot 5 is positioned in front of or next to the patient so the facial features may be detected and monitored. There is no description or suggestion in Kuno that the data-acquisition section 1 is capable of detecting a human from captured sound and providing a power drive unit that would move the robot 5 towards the patient. Instead, as previously indicated, the robot 5 is placed next to the patient, the robot 5 then captures facial features of the patient, and the robot 5 then would captures any sound signals, such as speech, from the patient to transmit them to a doctor for patient diagnosis.

In short, the robot of the Kuno patent may do whatever is required to monitor a hospitalized subject and observes the face features of the subject, but does not approach the subject to face him and take a picture. Therefore, Kuno also does not teach or suggest, at least, “an image cut out means for cutting out an image of the detected human according to information from the camera,” as recited in independent claim 1.

Accordingly, it is respectfully asserted that Kuno fails to teach or suggest all the recitations of independent claim 1 and related dependent claims 2-6. It is respectfully requested that the rejection to the claims be withdrawn.

REJECTION UNDER 35 U.S.C. § 103:

In the Office Action, at page 6, claims 1, 2, 5, and 6 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Publication No. 2004/0028260 to Higaki et al. ("Higaki") and Kuno. The Office Action took the position that Higaki and Kuno disclose all the aspects of claims 1, 2, 5, and 6. The rejection is traversed and reconsideration is requested.

As will be discussed below, Higaki and Kuno fail to disclose or suggest the elements of any of the presently pending claims.

Because the combination of Higaki and Kuno must teach, individually or combined, all the recitations of the base claim and any intervening claims of the dependent claims, the arguments presented above supporting the patentability of independent claim 1 over Kuno are incorporated herein.

Higaki is not a proper reference in these rejections, because it is barred by 35 U.S.C. 103(c). Higaki is available as a reference only under 35 U.S.C. 102(e), if at all. Higaki has a filing date of August 3, 2003 and was published on February 12, 2004. In contrast, the present application was filed April 1, 2004. Therefore, because both, Higaki and the present application were subject to an obligation of assignment to the same entity, namely Honda Corporation. Evidence of the present application's assignment to Honda Motor Corporation may be found in the assignment recorded September 29, 2003, at reel 014606 and frame 0417. Evidence of Higaki's assignment to Honda Giken Kogyo

Kabushiki Kaisha may be seen on the cover page of Higaki. Honda Giken Kogyo Kabushiki Kaisha is part of Honda Motor Corporation. The inventions were each assigned based on an obligation of assignment to Honda Motor Corporation. Accordingly, it is respectfully submitted that Higaki and the present application were both subject to an obligation of assignment to the same entity at the time of the invention, namely to Honda Motor Corporation.

Therefore, 35 U.S.C. 103(c) excludes Higaki from being used for obviousness rejections under 35 U.S.C. 103(a). As MPEP 706.02(I)(1) explains: “[S]ubject matter which was prior art under former 35 U.S.C. 103 via 35 U.S.C. 102(e) is now disqualified as prior art against the claimed invention if that subject matter and the claimed invention ‘were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.’” It is therefore respectfully submitted that Higaki is inappropriate prior art in the above rejections that rely on it. Because the rejections cannot stand without Higaki, it is respectfully requested that the rejections be withdrawn.

For the reasons explained above, it is respectfully submitted that the rejections of all of claims 1, 2, 5, and 6 are moot because Higaki may not be used as prior art against the present application and because Kuno fails to teach or suggest all the recitations of claims 1, 2, 5, and 6 for the reasons set forth above. It is therefore respectfully requested that all of claims 1, 2, 5, and 6 be allowed, and that this application be passed to issue.

In the Office Action, at page 10, claim 3 was rejected under 35 U.S.C. § 103 as being unpatentable over Higaki, Kuno, and further in view of U.S. Publication No. 2000/326274 to Shinichi ("Shinichi"). The Office Action took the position that Higaki, Kuno, and Shinichi disclose all the aspects of claim 3. The rejection is traversed and reconsideration is requested.

As will be discussed below, Higaki, Kuno, and Shinichi fail to disclose or suggest the elements of any of the presently pending claims.

Because the combination of Higaki, Kuno, and Shinichi must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 3, the arguments presented above supporting the patentability of independent claim 1 over Kuno are incorporated herein. Also, for same reasons set forth above, Higaki may not be used as prior art against the present application.

Shinichi generally describes an acting robot in which an image input device 1 inputs an image of one of cameras of a stereo-camera to a man detecting device 2, and inputs the images of both cameras to a distance calculating device 3. The man detecting device 2 detects a man by image processing, and extracts a face area of the man to follow up the face area thereafter. A man distinguishing device refers the information on an image of the man stored in a man information storing part 5, and a voice input device 6 consists of three microphones attached to a body, and outputs the inputs to a voice source direction detecting device 7. An obstacle detecting device 10 calculates a distance value

to an obstacle of every ultrasonic wave sensor 9 and holds the same, and a touch sensor 11 distinguishes a rubbed state and a tapped state and outputs the same.

However, Shinichi does not cure the deficiencies of Kuno. Similarly to Kuno, Shinichi does not teach or suggest, at least, “human detecting means for detecting a human **from the captured sound**” and “a power drive unit for moving the robot toward the detected human,” emphasis added, as recited in independent claim 1. Rather, from the description and figures provided in Shinichi, the image input device 1 inputs the **image** of one of cameras of a stereo-camera to a man detecting device 2, and **inputs the images of both cameras to a distance calculating device 3**. Similarly to Kuno, there is no description or suggestion in Shinichi that the distance calculating device 3 is capable of detecting a human from captured sound and providing a power drive unit that would move the robot towards the patient.

Accordingly, it is respectfully asserted that Kuno and Shinichi fail to teach or suggest all the recitations of independent claim 1 and related dependent claim 3. It is respectfully requested that the rejection to the claims be withdrawn.

CONCLUSION:

In view of the above, Applicants respectfully submit that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants further submit that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicants therefore

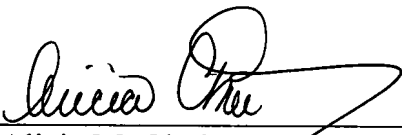
respectfully request that each of claims 1-6 be found allowable and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the Applicants respectfully petition for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


Alicia M. Choi
Registration No. 46,621

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

AMC:cmc